

CLAIM AMENDMENTS

1 1. (currently amended) A method for performing, for the
2 benefit of a reference provider having a set of users, connectivity
3 evaluations over a data communication network with respect to at
4 least one provider of interest the method comprising the steps of:

5 selecting a plurality of autonomous systems ~~capable of~~
6 adapted to form ~~[[ing]]~~ a traffic source or a traffic destination
7 for ~~[[the]]~~ users of said reference provider through the ~~[[same]]~~
8 reference provider,

9 supplying tables of ~~[[BGP]]~~ Border Gateway Protocol type
10 containing information on paths available on said data
11 communication network for ~~[[the]]~~ routing ~~[[of]]~~ said traffic with
12 regard to the autonomous systems of said plurality of systems,

13 extracting from said tables the paths of ~~[[BGP]]~~ Border
14 Gateway Protocol type inherent to said at least one provider of
15 interest, by ~~finding out~~ searching the paths that contain the
16 respective number of autonomous system for said at least one
17 provider of interest,

18 extracting for each autonomous system of said plurality
19 of systems, oriented subpaths between each of said autonomous
20 systems and said at least one provider of interest, by identifying
21 for each subpath ~~[[the]]~~ a respective length in number of hops,

22 identifying ~~[[,]]~~ for each autonomous system of said
23 plurality of systems ~~, at least one path between~~ a forward traffic

24 volume and a backward traffic volume with regard to the users of
25 said reference provider,

26 determining, for each of said subpaths respective
27 connectivity contribution [[s]] as a function of the respective
28 length in number of hops and of ~~said at least one~~ the forward
29 traffic volume or the backward traffic volume,

30 determining [[,]] for each autonomous system of said
31 plurality of systems [[, the]] total connectivity values
32 accumulating the connectivity contributions determined for the
33 oriented subpaths extracted for each of said autonomous systems,
34 and

35 accumulating the total ~~values of~~ connectivity values
36 determined for the autonomous systems of said plurality of systems,
37 so as to obtain total connectivity values relating to said at least
38 one provider of interest.

1 2. (previously presented) The method according to claim
2 1 wherein the steps are carried out for a plurality of providers of
3 interest present on said data communication network.

1 3. (currently amended) The method as recited in claim
2 2, further comprising the step of:

3 sorting the ~~values of~~ total connectivity values obtained
4 for the providers of interest of said plurality of systems in at
5 least one sorted list.

1 4. (currently amended) The method as recited in claim
2 1, further comprising the steps of:

3 identifying [[,]] for each autonomous system of said
4 plurality of systems [[,]] both the forward traffic volume [[,]]
5 and the backward traffic volume with regard to the users of said
6 reference provider, and

7 determining [[,]] for each of said subpaths [[,]]
8 respective contributions of connectivity as a function of the
9 respective length in number of hops and of both said volumes of
10 forward traffic and backward traffic.

1 5. (previously presented) The method as recited in
2 claim 4 further comprising the step of:

3 generating values of total connectivity for said at least
4 one provider of interest disaggregated into values of total
5 connectivity for forward traffic and backward traffic.

1 6. (currently amended) The method as recited in claim 1
2 further comprising the step of

3 submitting said tables of [[BGP]] Border Gateway Protocol
4 type to a clean-up operation to eliminate [[the]] comments
5 contained in said tables.

7. (canceled)

1 8. (currently amended) The method as recited in claim
2 2, further comprising the step of:

3 selectively reallocating [[the]] transit traffic through
4 said reference provider on at least one part of said providers of
5 interest of said plurality of systems.

1 9. (currently amended) A system for performing for the
2 benefit of a reference provider having a set of users connectivity
3 evaluations on a data communication network with respect to at
4 least one provider of interest, the system comprising:

5 tables of [[BGP]] Border Gateway Protocol type containing
6 information on paths available on said data communication network
7 for [[the]] routing [[of]] traffic with regard to a plurality of
8 autonomous systems ~~capable of~~ adapted to establish [[ing]] at least
9 one path between a source and a destination of traffic for [[the]]
10 users of said reference provider through the [[same]] reference
11 provider,

12 detection means for detecting, for each autonomous system
13 of said plurality of systems, at least one between a forward
14 traffic volume and a backward traffic volume with regard to the
15 users of said reference provider, and

16 processing means for:

17 extracting from said tables the paths of [[BGP]]
18 Border Gateway Protocol type ~~inherent to~~

19 associated with said at least one provider of
20 interest, by searching for the paths that
21 contain the respective number of autonomous
22 system for said at least one provider of
23 interest

24 extracting for each autonomous system of said
25 plurality of systems oriented subpaths between
26 said each autonomous system and said at least
27 one provider of interest, identifying for each
28 subpath ~~[[the]]~~ a respective length in number
29 of hops,

30 determining for each of said subpaths ~~respective a~~
31 connectivity contribution ~~[[s]]~~ as a function
32 of the respective length in number of hops and
33 of said ~~at least one~~ forward or backward
34 traffic volume with regard to the users of said
35 reference provider,

36 determining for each autonomous system of said
37 plurality of systems ~~[[the]]~~ total connectivity
38 values accumulating the connectivity
39 contributions determined for the oriented
40 subpaths extracted for each said autonomous
41 system, and

42 accumulating the total ~~values of~~ connectivity values
43 determined for the autonomous systems of said

44 plurality of systems, so as to obtain values of
45 total connectivity relating to said at least
46 one provider of interest.

1 10. (previously presented) The system as recited in
2 claim 9, configured for performing connectivity evaluations for a
3 plurality of providers of interest present on said data
4 communication network.

1 11. (previously presented) The system as recited in
2 claim 10, further comprising:
3 means for sorting the total connectivity values obtained
4 for the providers of interest of said plurality of systems in at
5 least one sorted list.

1 12. (previously presented) The system as recited in
2 claim 9 wherein:
3 said detection means is configured for detecting for each
4 autonomous system of said plurality of systems, both the forward
5 traffic volume and the backward traffic volume with regard to the
6 users of said reference provider, and
7 said processing means is configured for determining, for
8 each of said subpaths, respective connectivity contributions as a
9 function of the respective length in number of hops and of both
10 said forward traffic volume and backward traffic volume.

1 13. (previously presented) The system as recited in
2 claim 12 wherein said processing means is configured for generating
3 total connectivity values for said at least one ISP of interest,
4 disaggregated into total forward connectivity values and total
5 backward connectivity values.

1 14. (currently amended) The system as recited in claim
2 9 further comprising:

3 pre-processing means for submitting the tables of [[BGP]]
4 Border Gateway Protocol type to a cleanup operation to eliminate
5 [[the]] comments contained in said tables.

15. (canceled)

1 16. (previously presented) The system as recited in
2 claim 10 wherein the providers of interest of said plurality of
3 systems are equipped with a selective re-balancing module for
4 re-balancing the transit traffic through said reference provider.

17. (canceled)